National Aeronautics and Space Administration

A Look at NASA

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NASA Weekly Update

Week of April 30 – May 7, 2007

May 3: Veteran Astronaut Walter Schirra Dies: Pioneering astronaut Walter "Wally" Schirra, the only man who flew in all three of America's first human space projects - Mercury, Gemini and Apollo - died Wednesday night. He was 84. Schirra's family reported he died of natural causes. Schirra was one of America's original seven astronauts, selected in 1959, and was commander of the first crew to fly into space aboard an Apollo capsule, Apollo 7, following the tragic launchpad fire that claimed the lives of the crew of Apollo 1. Schirra lived in Rancho Santa Fe, Calif. Survivors include his wife Josephine, his daughter Suzanne and son Walter Schirra III. Images and video from Schirra's years with NASA can be seen at: http://www.nasa.gov/vision/space/features/walter_schirra.html.

May 8: NASA Offers Viewing Resources for Queen Elizabeth II Visit to Goddard: Queen Elizabeth II and Prince Philip, Duke of Edinburgh, will visit NASA's Goddard Space Flight Center in Greenbelt, Md., on Tuesday, May 8. NASA TV will broadcast live coverage along with b-roll feeds throughout the day, and the agency's Web site will provide information and images of the day's events. The main Web site for information updates and images as they become available: http://www.nasa.gov/goddard. Live television coverage highlights will include a call to crew aboard International Space Station, a welcoming event with NASA employees and a tree planting ceremony at Goddard's visitor center. NASA TV will air live coverage from approximately 10 a.m. - Noon EDT. NASA Television information and real-time schedule updates will be available at: http://www.nasa.gov/ntv.

May 10-13: NASA Featured at Public Service Recognition Week: NASA will be prominently displayed on the National Mall as part of the Council for Excellence in Government's Public Service Recognition Week. The highlight of NASA's exhibit will be a full-scale model of the James Webb Space Telescope, the next generation orbital observatory that will allow astronomers to peer through interstellar dust and look back nearly 13 billion years at the formation of the first stars and galaxies. The exhibit is open to the public from 10 am – 5 pm May 10–11 and 9 am – 4 pm

JWST team members at the Goddard Space Flight Center in Greenbelt, Md.

May 12–13. There will be a special VIP Congressional tour May 10, from 9 am – 10 am, followed immediately by a press conference at the JWST model. For more information contact Joshua Buck (jbuck@nasa.gov).

May 3: NASA Assigns Washington, D.C., Native to Upcoming Shuttle Mission: NASA astronaut and Air Force Col. Benjamin Alvin Drew will join the crew of the STS-118 space shuttle mission, targeted for launch Aug. 9. Drew, born in Washington, will take a seat that opened when astronaut Clayton Anderson was moved to shuttle Atlantis' STS-117 flight, which is targeted to launch June 8. Anderson will begin a long-duration mission on the International Space Station, and current station crew member Suni Williams will return to Earth aboard Atlantis. For more about the STS-118 crew and mission, visit: http://www.nasa.gov/shuttle.

May 4: NASA Awards Heat Shield Material Contracts for Orion Spacecraft: NASA has selected The Boeing Company, Huntington Beach, Calif., and

Textron Systems, Wilmington, Mass., to develop alternate heat shield materials for the Orion crew exploration spacecraft. The two contracts for Alternate Block 2 Thermal Protection System (TPS) Materials and Heat Shield Systems Advanced Development will support development and testing of three alternative heat shield materials, designs and manufacturing processes. Under the contracts, the companies will work to ensure the technologies are mature enough to become viable backups if there are difficulties with the primary material. For more information about the Orion heat shield, see: http://www.nasa.gov/centers/ames/research/humaninspace/cevheatshield.html. For information about Orion, visit: http://www.nasa.gov/orion.

May 4: NASA, FAA and Local Students to Demonstrate "Smart Skies": NASA and the Federal Aviation Administration (FAA) have established a partnership to foster student development of science, technology, engineering and math skills. Approximately 50 local students will join NASA Assistant Administrator for Education Joyce Winterton and FAA Associate Administrator for Region and Center Operations Ruth Leverenz for a demonstration of the new program Wednesday, May 9, at 10 a.m. EDT at the David J. Hurley Air Traffic Control System Command Center, 13600 EDS Drive, Herndon, Va. For more information about NASA education programs, visit: http://www.nasa.gov/education.

May 3: Peter Homer Wins NASA's Challenge for Improved Astronaut Gloves: On Thursday, May 3, Peter Homer of Southwest Harbor, Maine, won $200,000 from NASA for his entry in the Astronaut Glove Challenge. The competition was one of NASA's seven Centennial Challenges and took place May 2-3 at the New England Air Museum at Bradley International Airport, Windsor Locks, Conn. For more information about the Innovative Partnerships Program and Centennial Challenges, visit: http://www.ipp.nasa.gov/cc.

May 2: NASA Supports Train-Derailment Recovery in Alabama: Officials from NASA and ATK Launch Systems, Edina, Minn., are assisting the Federal Railroad Administration during its investigation of a train derailment Wednesday morning near Pennington, Ala. The train was carrying space shuttle reusable solid rocket motor segments from the ATK Launch Systems manufacturing site in Brigham City, Utah, to NASA's Kennedy Space Center, Fla. The special train carrying only solid rocket motor segments and a passenger car to monitor their transportation was crossing a bridge or a trestle, which collapsed under the locomotives. Six people were injured when the two locomotives and the passenger car dropped about 10 feet and turned on their sides. For information about the Space Shuttle Program, visit: www.nasa.gov/shuttle.

May 12: NASA's Centennial Challenge to Excavate Moon Dirt Set for May 12: On Saturday, May 12, teams from around the nation will compete for a total of $250,000 from NASA for an autonomously operating system to excavate simulated "lunar regolith," or the moon's soil. The Regolith Excavation Challenge, one of NASA's seven Centennial Challenges, will take place at the Santa Maria Fairpark, Santa Maria, Calif. The competition on May 12 from 7 a.m. to 5 p.m. PDT is free and open to media and the public. For more information about the Regolith Excavation Challenge, visit: http://www.csewi.org/regolith. For more information about the Innovative Partnerships Program and Centennial Challenges, visit: http://www.ipp.nasa.gov/cc.

May 1: Pluto-Bound New Horizons Provides New Look at Jupiter System: NASA's New Horizons spacecraft has provided new data on the Jupiter system, stunning scientists with never-before-seen

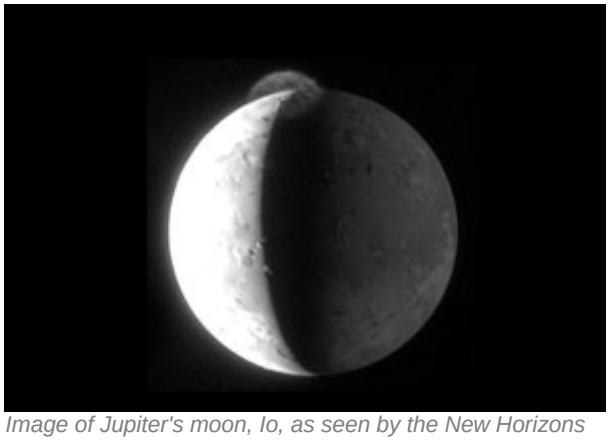

Image of Jupiter's moon, Io, as seen by the New Horizons spacecraft. A volcanic plume can be seen at the top of the moon.

perspectives of the giant planet's atmosphere, rings, moons and magnetosphere.These new views include the closest look yet at the Earth-sized "Little Red Spot" storm churning materials through Jupiter's cloud tops; detailed images of small satellites herding dust and boulders through Jupiter's faint rings; and of volcanic eruptions and circular grooves on the planet's largest moons. To view the new images visit: www.nasa.gov/newhorizons.

Weekly Status Reports

Mission: STS-117 - 21st International Space Station Flight (13A) - S3/S4 Truss Segment Solar Arrays
Vehicle: Atlantis (OV-104)
Location: Vehicle Assembly Building
Launch Date: Targeted for June 8, 2007

Launch Pad: 39A
Crew: Sturckow, Archambault, Reilly, Swanson, Forrester, Olivas and Anderson
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

In high bay No. 1 of the Vehicle Assembly Building, technicians and engineers continue repairing foam on the hail-damaged STS-117 external fuel tank, ET-124. Spray foam repairs began this week, and an area on the "ogive pencil point" (at the top of the tank) is scheduled to undergo a spray foam repair this weekend.

Mission: STS-118 - 22nd International Space Station Flight (13A.1) - S5 Truss Segment
Vehicle: Endeavour (OV-105)
Location: Orbiter Processing Facility Bay 2
Launch Date: Targeted for Aug. 9, 2007
Launch Pad: 39A
Crew: Kelly, Hobaugh, Williams, Morgan, Mastracchio, Caldwell and Drew
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

Mission: STS-120 - 23rd International Space Station Flight (10A) - U.S. Node 2
Vehicle: Discovery (OV-103)
Location: Orbiter Processing Facility Bay 3
Launch Date: Targeted for Oct. 20, 2007
Launch Pad: 39A
Crew: Melroy, Zamka, Parazynski, Wheelock, Wilson, Nespoli and Tani
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

International Space Station (ISS)

Marking the second week working together, the Expedition 15 crew wrapped up a week of various maintenance tasks, science experiments and preparations for the May 15 arrival of the Progress 25 supply ship. To prepare for the new unpiloted cargo carrier's arrival, the currently docked Progress' engines were used to reboost the station Saturday. The move increases the number of rendezvous opportunities for the STS-117 space shuttle mission targeted for next month. Expedition 15 Commander Fyodor Yurchikhin and flight engineers Oleg Kotov and Suni Williams also removed the docking mechanism from the Progress 24 for later use.

The week included work on a wide array of science experiments. Williams completed the fifth run of the Elastic Memory Composite Hinge experiment. The experiment studies the performance of a new hinge composite in space. Williams also did a test run of a handheld device for rapid detection of biological and chemical substances on board the station. This study is meant to provide an early warning system to protect the health and safety of station crew members. Williams also completed annual re-certification of the Microgravity Science Glovebox and performed a checkout of the cardiac defibrillator.

Kotov did maintenance work in the Zarya module and tested the circuits of a temperature sensor on one of the batteries. He also conducted the periodic collection of air readings in the station with the Russian Real-Time Harmful Contaminant Gas Analyzer system. Other hardware and maintenance tasks included the replacement of a Common Cabin Air Analyzer, sound level monitoring in the Russian Service Module and in the U.S. Destiny Laboratory, and charging U.S. spacesuits batteries. Crew members wrapped up the week replacing a heat exchanger in the Zvezda Service Module. They also swapped out computers used in the U.S. lab racks. For more about the crew's activities and station sighting opportunities, visit: http://www.nasa.gov/station.

Upcoming Events

- **May 10-13:** Public Service Recognition Week featuring a full-scale model of the James Webb Space Telescope on the National Mall.
- **June 8:** Launch of Space Shuttle Atlantis from Kennedy Space Center for mission STS-117.
- **June 20:** NASA Day on the Hill in the Rayburn Foyer.
- **June 30:** Dawn launch from Cape Canaveral Air Force Station on a Delta II rocket.
- **Aug 9:** Launch of Space Shuttle Endeavor from Kennedy Space Center for mission STS-118.

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